CLAIMS:

We claim:

1. A process for the oligomerization of olefins, which process comprises the steps of contacting an olefinic feedstock containing at least one olefin having 4 or 5 carbon atoms under oligomerization conditions with a selectivated crystalline molecular sieve oligomerization catalyst and recovering an olefinic oligomeric product, of which at least a dimeric or a trimeric component has an average degree of branching of at most 2.0 and a Type V double bond content of at most 10%.

2. A process as claimed in claim 1, wherein the olefinic oligomeric product has an average degree of branching of at most 2.0 and a Type V content of at most 10 molar %.

3. A process as claimed in claim 2, wherein the average degree of branching is within the range of from 0.5 to 2.0.

4. A process as claimed in claim 3, wherein the average degree of branching is within the range of from 0.8 to 2.0.

5. A process as claimed in any one of claims 1 to 4, wherein the feedstock also contains propene.

6. A process as claimed in any one of claims 1 to 5, wherein the feedstock contains at least one C_4 olefin.

7. A process as claimed in claim 6, wherein the feedstock contains by weight about 48 to about 65% butenes and about 35 to about 50% butanes.

8. A process as claimed in claim 6 or claim 7, wherein the octene product has an average degree of branching of at most 2.0, and a skeletal isomer content:

Type I	from 0.7 to 2.0
Type II	from 18.0 to 30.0
Type III	from 5.0 to 10.0
Type IV	from 45.0 to 65.0
Type V	at most 10%.

9. A process as claimed in claim 8, wherein the octene product has a proportion of methylheptenes in the range of 62 to 83%.

10. A process as claimed in claim 6 or claim 7, wherein the dodecene product has an average degree of branching of at most 2.0, and a double bond structure as follows:

Type I	from 0.5 to 10%
Type II	from 25 to 45%
Type III	from 3.5 to 6%
Type IVA	from 45 to 65%
Type IVB	at most 3%
Type V	at most 5%.

11. A process as claimed in claim 10, wherein the dodecene has a double bond structure within the following ranges:

Type I	0.5 to 2.8%
Type II	31.6 to 41.7%
Type III	3.8 to 5.2%
Type IVA	46.2 to 52.9%
Type IVB	0 to 2.2%
Type V	0 to 1.2%.

12. A process as claimed in any preceding claim, wherein oligomerization is carried out at a temperature within the range of from 160°C to 250°C.

13. A process as claimed in any preceding claim, wherein oligomerization is carried out at a weight hourly space velocity within the range of from 0.1 to 4.0.

14. A process as claimed in any preceding claim, wherein oligomerization is carried out at a conversion rate per pass of at most 65%.

15. A process as claimed in any preceding claim, wherein oligomerization is carried out at a pressure within the range of from 3.4 MPa to 10.5 MPa.

16. A process as claimed in any preceding claim, wherein the catalyst is selectivated ZSM-22 or selectivated ZSM-23.

17. A process as claimed in claim 16, wherein from 10 to 50% of acid sites are selectivated.

18. A process as claimed in claim 16 or 17, wherein selectivation has been carried out using 2,4,6-trimethylpyridine.

19. A process as claimed in any one of claims 1 to 8, which also comprises the step of recovering a dimer fraction from the oligomer product.

20. A process as claimed in any one of claims 1 to 7, which also comprises the step of recovering a trimer fraction from the oligomer product.

21. A process as claimed in any one of claims 1 to 7, which also comprises the step of recovering an oligomer product containing at least 10 carbon atoms.

22. A process as claimed in any preceding claim, which also comprises the step of oxonating the oligomer product and recovering a resulting aldehyde product.

23. A process as claimed in claim 22, which also comprises the step of hydrogenating the aldehyde product and recovering a resulting alcohol product.

24. A process as claimed in claim 23, which also comprises the step of esterifying the alcohol product.

25. A process as claimed in claim 23, which also comprises the step of etherifying the alcohol product.

26. A process as claimed in claim 22, which also comprises the step of oxidizing the aldehyde product and recovering a resulting acid product.

27. A process as claimed in claim 26, which also comprises the step of esterifying the acid product.

28. A plasticizer composition comprising the product of the process of claim 24 or claim 27.

29. A polymeric composition comprising a polymer and a plasticizer composition as claimed in claim 28.

30. A shaped structure formed of the plasticized polymer composition of claim 29.

31. A synthetic lubricant or lubricant component comprising the product of the process of claim 24 or claim 27.

32. A synthetic detergent or detergent component comprising the product of the process of any one of claims 24 to 27.

33. An alcohol or alcohol mixture the product of the process of claim 23.

34. An ester or ester mixture the product of the process of claim 24 or claim 27.

35. An acid or acid mixture the product of the process of claim 26.

36. The product of the process of any one of claims 1 to 27.

37. A process for the manufacture of an alkylarene, which comprises reacting the product of claim 36 with an arene and recovering the alkylarene.

38. A process for the manufacture of an alkylarene, which comprises recovering from the product of claim 36 a $C_{10}+$ fraction, reacting the said fraction with an arene, and recovering the alkylarene.